WHAT SCIENCE SAYS.

The "Fearful and Wonderful" Mechanism of the Human System Graphically Portrayed.

[In the editorial columns of the New York Ledger, H. Lassing, M. D., editor, writes the following beautiful description of the laboratories of the human system. We think we have never read a finer or more trustworthy one.]

"Man is the greatest of all chemical laboratories. Magnify the very smallest cell of the body and what a factory is spread before the eyes: countless chambers in which are globes of air, masses of solid matter, globules of dying liquid; a flash comes and the whole is consumed and needful heat is carried into every part of the system. Electrical forces also generate and are conveyed to the brain, the muscles and the various nerve centers.

"In another set of a million chambers we see various gases and vapors. By chemical action these are changed and purified in the lungs and the skin. The blood we often say is a great living river. In its current are masses which the air in the lungs did not affect: blocks of chalk; slabs of tartar; pieces of bone-ash; strings of albumen; drops of molasses, and lines of alcohol. How are these waste masses disposed of? Begin where you will in this great stream you must come to the purifying places of the system. Here is all activity and an invisible force reaches out into the stream, seizes and carries this mass of waste into vast trenches, thence into a smaller reservoir, and finally into a larger reservoir, which regularly discharges its contents.

"This separation of lime, uric acid and other waste material from the blood without robbing it of a particle of the life fluid, passes human comprehension. In health this blood-purifying process is carried on without our knowledge. The organs in which it is done are faithful servants whose work is silent as long as health remains.

"People strangely wait until pain strikes a nerve before they will realize that they have any trouble. They do not know that pain concerns chiefly the exterior not the interior of the body. A certain set of nerves connect the blood-purifying organs with the brain. They may not gnaw and bite as does the tooth-ache or a scratch, but they regularly, silently report. When these organs are failing these nerves indicate it by drawing the blood from the face and cheek, leaving the lip and eye blanched, by sending uric acid poison into the smallest veins, the skin then becoming gray, yellow or brown. They also prevent the purification of the blood in the lungs and cause pulmonary difficulties, weariness and pain. Who enjoys perfect health, especially in this land where we burn the candle in one mass? The athlete breaks down in the race; the editor falls at his desk; the merchant succumbs in his counting-room. These events should not have been unexpected, for nature long ago hung out her 'lanterns of alarm.' When the 'accident' finally comes, its fatal effect is seen in a hundred forms, either as congestion, chronic weakness, as wrong action, as variable appetite, as head troubles, as palpitation and irregularities of the heart, as premature decay, as dryness and harshness of the skin, causing the hair to drop out or turn gray, as apoplexy, as paralysis, as general debility, blood poisoning, etc.

"Put no faith then in the wiseacre who says there is no danger as long as there is no pain. Put no faith in the physician, whoever he may be, who says it is a mere cold or a slight indisposition. He knows little, if any more than you do about it. He can neither see nor examine these organs and depends entirely upon experimental tests, that you can make as well as he.

"If the urine is discolored or muddy, if it contains albumen, lymph, crystals, sweet or morbid matter, is red with escaped blood, or rosy with gravel, mucus and froth, something is wrong and disease and death are not far away.

"These organs which we have described thus at length, because they are really the most important ones in the human system, the ones in which a large majority of human ailments originate and are sustained, are the kidneys. They have not been much discussed in public because it is conceded that the profession has little known power over them. What is wanted for such organs is a simple medicine, which can do no harm to the most delicate, but must be of the greatest benefit to the afflicted. Such a remedy, tried and proved by many thousands all over the world, is Warner's Safe Cure. With those in whom disease is deep seated it is the only specific. For those in whom the seeds are sown and the beginning of illness started, it is an unfailing reliance. It may be recommended to the well to prevent sickness and the sick to prevent death. With its aid the great filtering engines of the system keep on their silent work without interruption; without it they get out of gear and then disease and death open the door and cross the threshold."

Such writing ought not only to please but to carry conviction that what Editor Lassing, M. D.—so high an authority—says is true, and that his council is worthy the attention and heed of all prudent, right-minded people.

TALE OF THE FOURTH.

Philadelphia in July! Not even the most loyal boy or girl of that good old Quaker town but must admit that Philadelphia in July is a hot place.

"Warm and sunshiny," were the words that Mr. John Nixon, in his daily journal for the year 1776, placed against the early days of July, but I am inclined to think that young Joe Nixon was nearer the fact when he called it broiling hot."

Very possibly, however, this slight exaggeration on the part of young Joe was due to the fact that he was very busy and therefore very warm. Not that he had anything of especial importance to do. Not always those who are busiest have the most to do; but you see there was a great deal to hear and see in Philadelphia-town in the early days of July, in the year 1776, and young Joe Nixon, like a true American boy, felt it his duty to be on hand when anything of importance was on foot.

And so he was continually on the go between his uncle's big house on the Water Street, the room of the Committee of Inspection on Second Street, the parade ground of the "Quaker Blues" on the city common, and the big brick State House on Chestnut Street.

For young Joe Nixon was a privileged character and duly felt his importance. His uncle, Mr. John Nixon, was a member of the committee of safety, and better still, young Joe was a particular favorite of Mr. David Rittenhouse, who had charge of the public clock in the State House Square." This put him on good terms with a still more influential acquaintance—the door keeper of the Continental Congress, then in daily session in the assembly chamber of the State House.

Young Joe was a quick-witted lad and like all the rest of the race of boys dearly loved to watch and listen even though he could not always understand. Seated by the side of his friend, the door keeper, he found it very interesting and sometimes highly exciting to follow the proceedings of the hewigged and earnest gentlemen who were talking, discussing, and sometimes getting quite angry with one another on the floor of the Congress. Joe only knew in a general sort of way what all this talk and discussion meant. But one thing he was certain of, as were all the boys and girls in the Colonies—and that was that there was a "jolly row" on and between the colonies and the king. He knew, too, that away off toward Boston-town there had been two or three fights with the king's soldiers, in which the troops of the Colonies by no means had the worst of it. And he knew, most of all, that it was mightily hard just now for a boy to get hold of anything new or nice to eat or to wear or to play with, and that, somehow, this was all the fault of King George the Third, and that the Colonies did not propose to stand this sort of thing any longer.

So he had made the most of his acquaintance with the doorkeeper of the Congress, and had witnessed most of the important events that had taken place during that lovely Philadelphia June.

He had looked with all the awe of a small boy of twelve upon the fifty or more gentlemen—the delegates to the Congress—who, representing the thirteen colonies, were ranged in a half-circle on either side of Mr. Hancock, the President. But I think he admired, even more, the "elegant standard, suspended in the Congress room," over the door of entrance at which he sat with his friend, the doorkeeper, and which was "a yellow flag with a lively representation of a rattlesnake in the middle, in the attitude of going to strike, and these words underneath: 'Don't tread on me!'"

He had been in the Congress room so often that he knew most of the delegates by sight and name: that gentleman in the big chair behind the heavy mahogany table and the great silver ink-stand—the gentleman with the scarlet coat and the black velvet breeches—was Mr. John Hancock, the President of the Congress—"Rosy John," the tory boys called him, much to young Joe's fretful indignation; that gentleman in the long waisted white cloth coat, scarlet vest and breeches, and white silk hose was Mr. Jefferson, of Virginia, that gentleman in a long buff coat, and embroidered silk vest was, as of course every Philadelphia boy knew, the great Dr. Franklin; and there, too, were Mr. Adams and Mr. Gerry, of Massachusetts; Mr. Sherman, of Connecticut; Mr. Clinton, of New York; Mr. Stockton, of New Jersey; Mr. Carroll of Maryland; Mr. Lee, of Virginia; Mr. Rutledge, of South Carolina, and many others whose faces and whose voices had now grown familiar. Even his boy's mind, thoughtless of the present and careless of the future though it was, had felt the excitement of the moment when on Friday, June 7, Mr. Richard Henry Lee, of the Virginia colony, had risen in his place, and, "amidst breathless silence," had read to the Congress this notable resolution:

"*Resolved*, that these United Colonies are, and of right ought to be, free and independent States, that they are absolved from all allegiance to the British Crown, and that all political connection between them and the State of Great Britain is, and ought to be, totally dissolved."

Then Mr. John Adams, of Massachusetts, seconded the resolution. Mr. Thompson, the secretary, made the official entry in the journal, the Congress with but few words, postponed its consideration until the next day, and young Joe Nixon adjourned with the delegates, like them, half-dazed and half-jubilant.

So, through the long June days, the Congress argued and debated and hesitated, while young Joe Nixon—a true type of the restless young America that is ever in a hurry for action and results—watched and wished and wondered not thinking of what might be in the future save that King George was to be thrown overboard and the colonies were to set up for a nation.

At last, on June 28th, a committee, consisting of Mr. Jefferson, of Virginia; Mr. Adams, of Massachusetts; Dr. Franklin, of Pennsylvania; Mr. Sherman, of Connecticut, and Mr. Livingstone, of New York, presented to the Congress a long paper which young Joe understood was called a Declaration of Independence. And although he thought it was splendid and full of the most mightily strong blows against King George, much to the lad's disgust, the Congress did not seem to go into ecstasies over it, but hummed and hawed and debberated until July 2d, when Mr. Lee's original resolution was put to vote, carried by the voice of every colony except New York, and the united colonies were declared to be free and independent States.

Young Joe Nixon had he dared, would have tossed his little three-cornered hat in the air with a loud hurrah, but the gentlemen of the Congress, he thought, seemed strangely quiet about it all. He did not see that their wiser heads comprehended that the vote of the Congress on that 2d of July meant years of struggle against a mighty power—sorrow and privation and, perhaps, after all only defeat and, to the leaders, the disgraceful death of traitors. He saw only the glowing colors of victory and excitement as young folks are apt to, and as it is right they should.

And yet that very night, as the Congress adjourned, portly Mr. John Adams, with whom the lad was quite a favorite, noticed the ill concealed exultation of the boy, and laying a hand upon his head, said to him: "A great day this, my young friend; a great day, is it not?"

"O, yes sir," replied Joe with energy; "I'm so glad it passed, sir."

"And so am I, my lad," said Mr. Adams, with almost equal enthusiasm; "you are a bright and seemly little lad, and will not soon forget this day. I'll be bound. So mark my words, my lad. The 2d of July, 1776, will be the most memorable day in all the history of America. It will be celebrated ere you grow to manhood, and by succeeding generations, as the great anniversary festival, commemorated as the day of deliverance, by solemn acts of devotion to God Almighty, from one end of the continent to the other, from this time forward for evermore."*

"Yes, sir," said Joe respectfully. He did not comprehend all the meaning of Mr. Adams' solemn words, but he was quite as confident as was that gentleman, that it was a day, the anniversaries of which would mean in future plenty of fun and jubilee.

Good Mother Nixon could get but little work from her Joe on the following morning. And though, in her peaceful Quaker way, she bade him beware of too much glorying in all the strife and warfare that seemed a-foot, I rather suspect that even her placid face flushed with quiet enthusiasm as she besought her boy to remember that right was always right, and that it was nobler and manlier to boldly face whatever might betide than to be as were some men in their Quaker town who so she said, "loved too much their money and their ease, and did but make conscience a convenience, instead of being sincerely and religiously scrupulous of bearing arms." All of which meant that there were some craven folk in that day of manly protest against tyranny who, to save themselves from annoyance, pretended to be Quakers and "non-combatants," when they were only skulking cowards. And all such every honest Quaker utterly detested.

But young Joe Nixon, too full of the excitement of the moment, paid but little regard to his good mother's words, inasmuch as they did not apply to his case; and, hot and panting, fearful lest he should miss something new, dashed up to the State House, and slipped in beside his friend, the doorkeeper.

The Congress was already in session. Mr. Jefferson's paper called "the Declaration respecting Independence" had been taken up for consideration, and was being soberly debated, paragraph by paragraph.

Frequent repetitions had made Joe familiar with some of the phrases in this remarkable paper. Even his young heart beat high as he heard some of those ringing sentences—about all men being created equal and being "endowed with the inalienable rights of life, liberty, and the pursuit of happiness;" how that "whenever any form of government becomes destructive to these ends, it is the right of the people to alter or abolish it;" that "the history of the present king of Great Britain is a history of repeated injuries and usurpations;" that "a prince whose character is thus marked by every act which may define a tyrant is unfit to be the ruler of a free people;" that "we must, therefore, hold the British people, as we hold the rest of mankind, enemies in war, in peace, friends;" that "we, the representatives of the United States of America in general Congress assembled, appealing to the Supreme Judge of the world for the rectitude of our intentions, do, in the name and by the authority of the good people of these colonies, solemnly publish and declare that these united colonies are and of right ought to be free and independent States;" and, lastly, that "for the support of this declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our lives, our fortunes, and our sacred honor."

Joe, as I have said, had felt his young heart glow and his young pulse beat under the enthusiasm of these ringing declarations, and all this debating and questioning appeared to him as fearfully slow and faint-hearted; he wondered why, since the Congress had already passed Mr. Lee's resolutions of independence, they should so hesitate over Mr. Jefferson's Declaration of Independence; and, quite frequently, he felt compelled to dash out into the hot and sunny street and work off his impatience in a wild and purposeless "go-as-you-please" around what was called Mr. Rittenhouse's Observatory" in the center of the square.

The day dragged on and so did the debate. Even Mr. Jefferson lost patience and, confessing that he was "writhing under" all this talk, needed all of Dr. Franklin's philosophy and example to calm him down again. So it is not to be wondered at that, late in the afternoon, Joe Nixon, enthusiastic young patriot though he was, grew wearied with the talk and the delay, and determined to go home. But, just as he was leaving the building, there dashed into the State House yard a big chestnut horse covered with foam and dust. Its rider, a fine, well-built man in dust-stained traveling cloak, sprang from the saddle and, dropping the bridle rein into Joe's ready hand with a quick "Here, my lad, take my nag to the City Tavern stables, will you?" hurried without further words into the Congress room.

Joe's impatience changed to burning curiosity again, and, transferring his panting charge to another ready lad for attention, he too hurried into the hall and asked his friend, the doorkeeper, who this newcomer might be.

"Why, lad, 'tis Mr. Cæsar Rodney, don't you know," replied the doorkeeper. "The delegate from the Counties upon Delaware† whom they sent for by special post only yesterday, since his colony is divided in action, and his vote is needful to carry the Declaration through."

"And did he ride from home to-day?" inquired Joe.

"Surely, boy," said the doorkeeper, "clean from the County of Kent, eighty miles away. 'Twas a gallant day's ride, and a fair day's work, for by it is independence won."

It was even as he said. Rodney's glorious ride secured the vote of Delaware for the Declaration, and late that very night of Wednesday, the 3rd of July, by a majority vote of the States—as the colonies now call themselves—the immortal paper that we know as the Declaration of Independence, passed the Congress.

But before it was handed to the secretary to be engrossed, or copied, so that it might be signed by all the delegates; Mr. Hancock, as President of the Congress, affixed to it his bold signature that we all now know so well. And young Joe Nixon had, actually, to stuff his hat into his mouth to stifle the hurrah that did so want to burst out when Mr. Hancock, rising from his seat, said in his most decided tones:

"There! John Bull can read my name without spectacles. Now let him double the price of my head, for this is my defiance."‡

Then the Congress adjourned, and young Joe went home, completely tired out with the day's excitement and anxiety. And, though on that notable night of the 3rd of July a nation had been born, Philadelphia lay quietly asleep knowing little or nothing of the great happening.

Next day—the first Fourth of July ever specially known to Americans—Joe was about the only privileged character, who slipping into the secret session heard, from his seat by the side of his friend, the doorkeeper, the order given by Mr. Hancock as President of the Congress, that "copies of the Declaration be sent to the several assemblies, conventions, and committees or Councils of Safety, and to the several commanding officers of the Continental troops; that it be proclaimed in each of the United States and at the head of the army."

This was all that was done on the Fourth of July, 1776, as young Joe Nixon could testify. But the printed copies of the Declaration prepared for transmission to the several States, and to the army, and signed by Mr. Hancock, the President of the Congress and by Mr. Thomson, the secretary, all bore the heading: "In Congress, July 4, 1776," and thus that date has come down to us, as one to be especially remembered.

That very night Joe heard, at his uncle's big house on the Water Street, that the committee of safety in Philadelphia—of which, as I have said, Mr. John Nixon was a member—had ordered that "the sheriff of Philadelphia read or cause to be read and proclaimed at the State House, in the city of Philadelphia on Monday, the 8th day of July instant, at 12 o'clock, at noon of this same day, the Declaration of the Representatives of the United States of America, and that he cause all his officers and the constables of the said city to attend to the reading thereof."

Here was a new treat in store for young Joe; and when he learned that the Worshipful Sheriff had designated his uncle Mr. John Nixon, as the reader, Joe knew that this meant a front seat for him, and was appropriately jubilant.

The day came. Monday, the 8th of July, 1776. "A warm and sunshiny morning" again reads the truthful journal, and 12 o'clock, noon, must have been hot indeed. But not all the heat of a Philadelphia July could wither the ardor of such patriots as young Joe Nixon. He was therefore a very "live" portion of the procession which forming at the hall of the committee of inspection in Second Street, joined the committee of safety at their lodge, and to the stirring sounds of fife and drum, marched into the State House square. Out from the rear door of the State House came the Congress and other dignitaries and then, standing upon the balcony of Mr. Rittenhouse's astronomical observatory just south of the State House, Mr. John Nixon, in a voice both loud and clear, read to the assembled throng the paper which declared the United States of America "Free and Independent."

The reader concluded with the glorious words: "We mutually pledge to each other our lives, our fortunes and our sacred honor," and, as his voice ceased, the listening throng, so the record says, "broke out into cheers and repeated huzzas." Then the Royal arms were torn down from above the seats of the King's Judges in the State House, and Joe, like a wild young Indian, danced frantically around the bonfire which destroyed these "insignia of royalty."

Again, at 5 o'clock, the Declaration was read to the troops then present in the town, and the evening was given up to bonfires and fireworks which you may be certain young Joe enjoyed to his full content.

And peal upon peal, sounding above all the shouts and the hurrahing, rang out loud and clear, at both the noon reading and the night's celebration, the joyous clang of the big bell of the State House telling the glad tidings of freedom, as well befitted a bell on whose brazen rim men had read for twenty-four years the almost prophetic motto: "Proclaim liberty through all the land to all the inhabitants thereof."

To his dying day Joe Nixon never forgot the glory and exultation of that jubilant first Independence Day—8th of July, 1776.

One other notable scene also lived long in his memory—a day and a date new to many of us who have always supposed that the Declaration of Independence was passed, signed and proclaimed on the Fourth of July. It was the morning of Tuesday, the second of August, that same historic summer of 1776. From his customary seat by the doorkeeper, Joe saw Mr. Thomson, the secretary of the Congress, lay upon the President's table a great sheet of parchment. And on this sheet, carefully and beautifully copied, was the Declaration of Independence. Then, one by one, beginning with Mr. Hancock the President, the delegates to the Congress, signed the great paper, and by that act sent their names down to posterity—famous and honored forever.

Of the fifty-six signers of the Declaration not all affixed their names to the document on that notable second of August. Absentees and new-comers added their names as they joined the Congress, and not until the fourth day of November, 1776, was the last signature affixed.

Names and dates go for but little when a great deed is done. The deed itself is of more importance than either names or dates. But to us of this second century of the republic there is both interest and pleasure in re-telling the story of liberty, and following out by dates, altogether new to most of us, the real progress of the historic document that made us a nation.

Instead of one "Fourth of July," you see, we have really four: The 2d of July, upon which Mr. Lee's Resolution of Independence was passed by the Congress; the Third of July upon which the Declaration itself was passed; the Fourth of July which witnessed the order for its proclamation, and the Second of August upon which it was actually signed by the members of Congress.

The original document to which these names were signed still exists, grown worn and yellow with age. The Liberty Bell that rang out the joyous new of freedom on the sunny noon and the starlit night of the eventful Eighth of July, is now cracked and voiceless. The signers themselves are now only names and memories; but their work lives in the power and glory of the great nation which they founded, and every true American girl and boy honors the memory and applauds the courage of those devoted men. And upon each recurring Fourth of July every girl and boy in the land is as joyous and jubilant a young patriot as was even young Joe Nixon when with bonfire and rude, old-time fireworks, with hurrah and shout and song he celebrated, in the days when George the Third was King, the first Fourth of July on the Eighth.—*Young Folks' Journal.*

*John Adams' own words.

†Until August, 1776, Delaware was known in the Congress as "The Counties of New Castle Kent and Sussex upon Delaware," after that as "The Delaware State," and in 1792 as the "State of Delaware."

‡Said to have been his very words on signing the draft of the Declaration. The British government at last offered a reward of £5,00 for the capture of John Hancock and John Adams.

THE advertisement of Dr. Foote, Sr. appears in THE HERALD every Sunday. Therein will be found his address.